Ordering number: EN1521D

Monolithic Linear IC

LA1185

FM Front-end for Radio-cassette Recorder, Home Stereo Applications

Overview

The LA1185 is an FM receiver front-end IC for radio-cassette recorder, music center applications. Its mixer is of double-balanced type. The built-in oscillator and buffer amplifier improves the strong input characteristic.

Use

- FM front-end IC for radio-cassette recorders and music centers

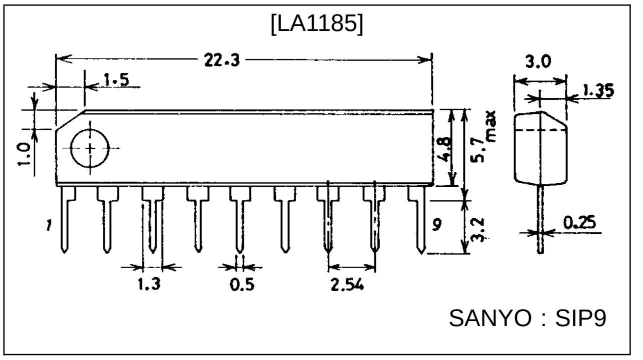
Functions and Features

- RF amplifier, mixer, local oscillator
- Improvement in cross modulation characteristics due to the use of double-balanced mixer.
- Improvement in strong input characteristic.
- Minimum number of external parts required.
- Less spurious radiation from local oscillator.
- Operating voltage range : 1.5 to 8.0 V

Package Dimensions

unit : mm

3017C-SIP9



Specifications

Maximum Ratings at Ta = 25°C

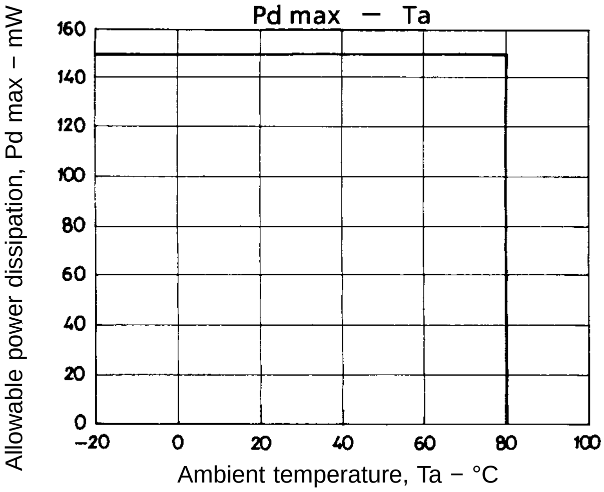
Parameter	Symbol	Conditions	Ratings	Unit
Maximum supply voltage	V_{CC} max		8	V
Maximum pin voltage	V_{3-5}		12	V
	V_{6-5}		V_{CC} + 0.8	V
Allowable power dissipation	Pd max	Ta ≦ 80°C	150	mW
Operating temperature	Topr		–20 to +80	°C
Storage temperature	Tstg		–40 to +125	°C

Operating Conditions at Ta = 25°C

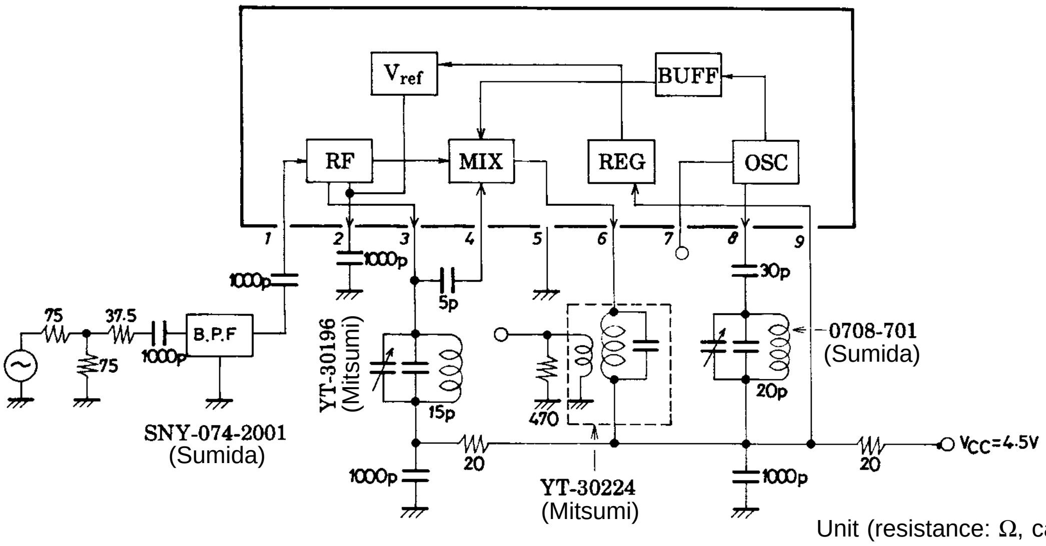
Parameter	Symbol	Conditions	Ratings	Unit
Recommended supply voltage	V_{CC}		4.5	V
Operating voltage range	V_{CC}op		1.5 to 8.0	V

Operating Characteristics at Ta = 25°C, V_{CC} = 4.5 V, fr = 108 MHz, f_{OSC} = 118.7 MHz, See specified Test Circuit

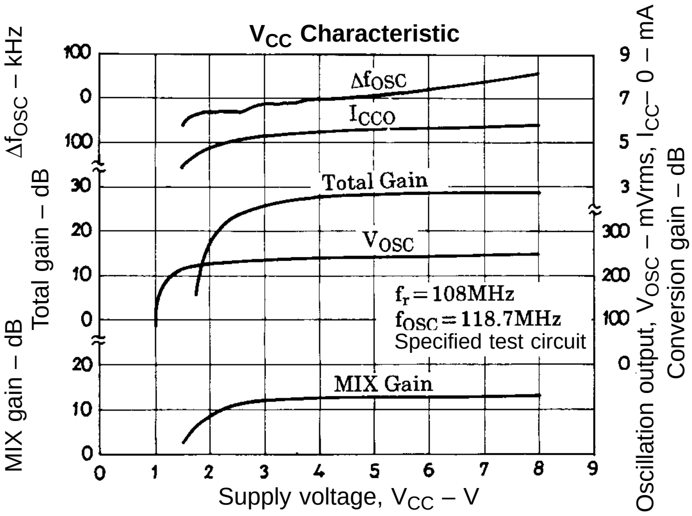
Parameter	Symbol	Conditions	min	typ	max	Unit
Current dissipation	I_{CC}	Quiescent		5.5	8.0	mA
Output saturation voltage	Vo	100 dBµ	95	115	135	mVrms
Local oscillation voltage	V_{OSC}	V_{CC} = 2 V	190	235		mVrms
Oscillation stop voltage	Vstop			1.4	1.6	V

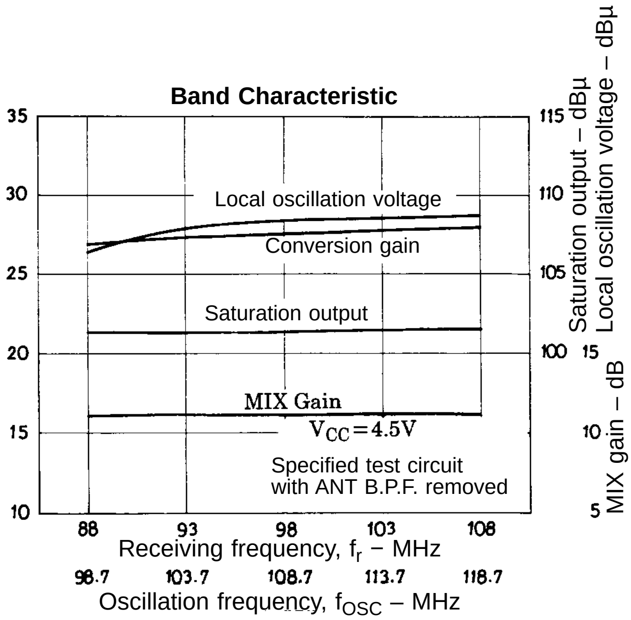


Test Circuit and Equivalent Circuit Block Diagram

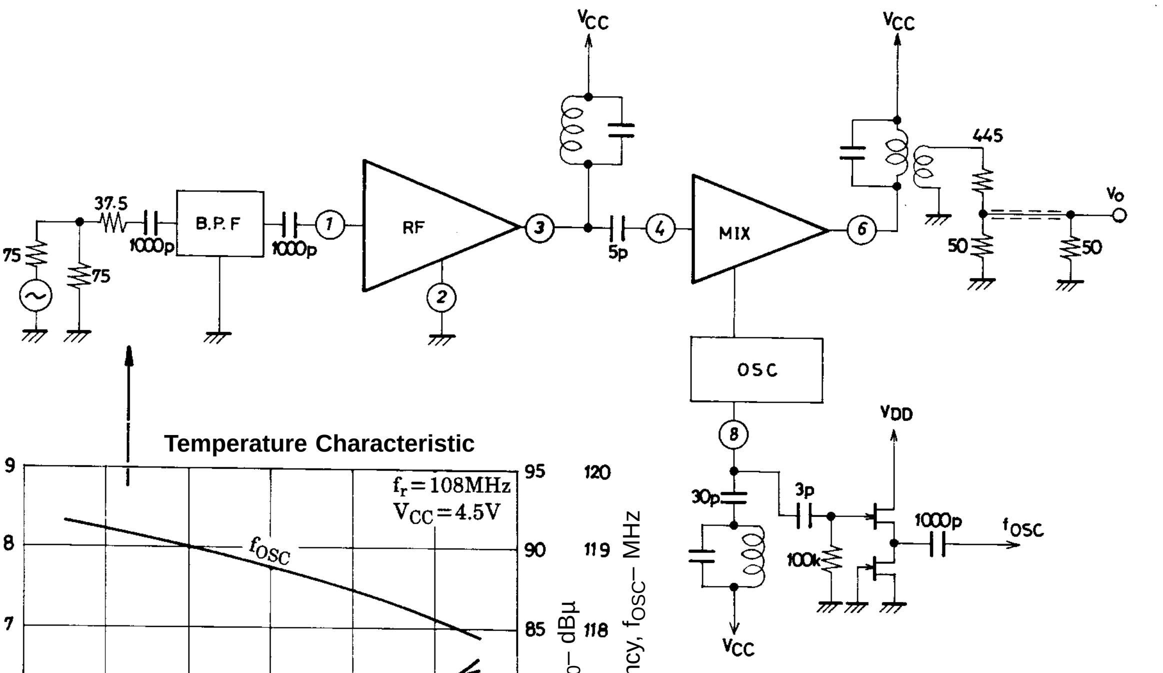


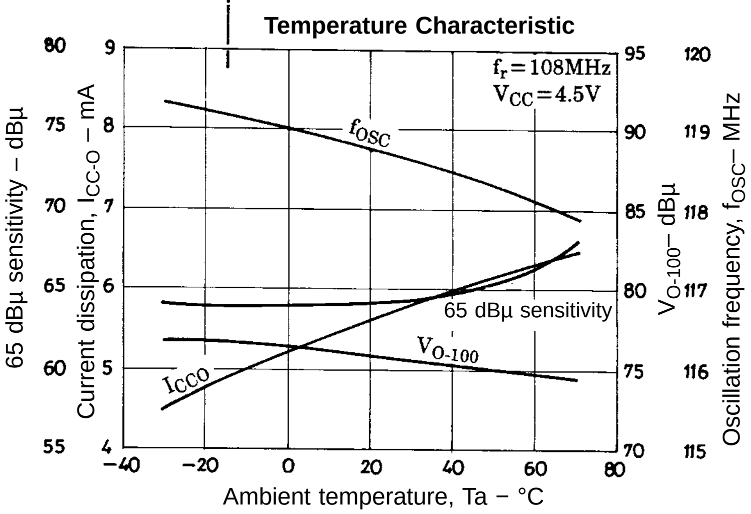
Unit (resistance: Ω, capacitance: F)





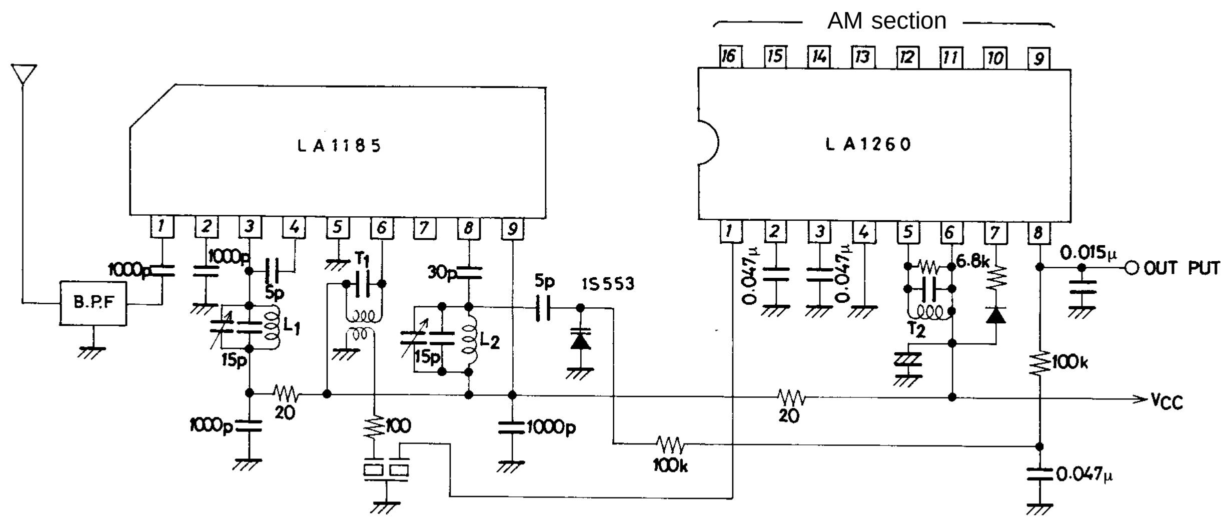
Temperature Characteristic Test Circuit

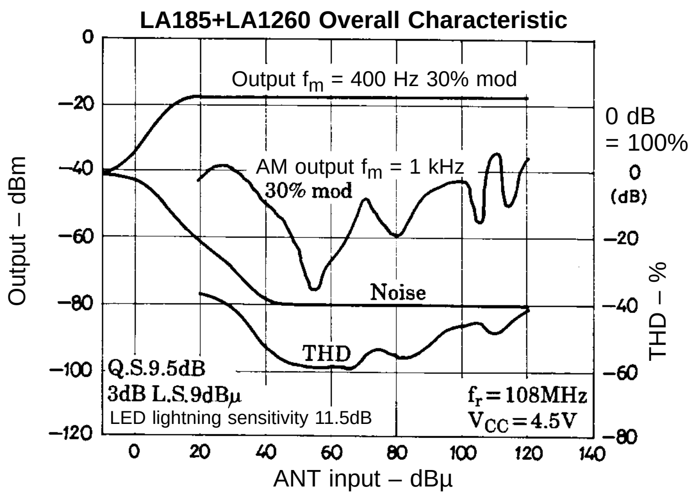




Unit (resistance: Ω, capacitance: F)

Sample Application Circuit: LA1185 + LA1260 US band





Unit (resistance: Ω, capacitance: F)

	Mitsumi	Sumida
T1	YT-30224	2153-4016-006
T2	YT-30194	2153-4095-339
L1	YT-30196	0708-700
L2	YT-40001	0708-701
B.P.F.	YT-30025	SNY-074-2001

